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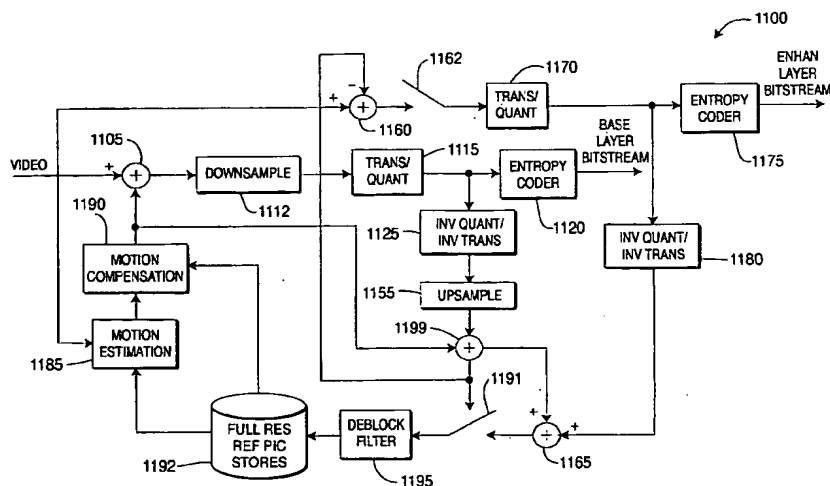
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(54) Title: COMPLEXITY SCALABLE VIDEO ENCODING



(57) Abstract: A video decoder, a video decoding method, a video encoder and a video encoding method are disclosed. A video decoder for decoding a video bitstream for an image block includes a motion vector resolution reducer (999) and a motion compensator (960). The motion vector resolution reducer is for receiving decoded high resolution motion vectors included in the video bitstream and for reducing an accuracy of the high resolution motion vectors to correspond to a low resolution. The motion compensator, in signal communication with the motion vector resolution reducer, is for forming a motion compensated high resolution prediction using the reduced accuracy motion vectors. The video encoder for encoding scalable video comprises a motion compensator (1190) for forming a motion compensated full resolution prediction and combining combining (1105) the motion compensated full resolution prediction from an image block to form a prediction residual. The prediction residual is downsampled (1112) to form a low resolution downsampled prediction residual and then coded (1115).

WO 2005/099276 A3

**WO 2005/099276 A3**



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*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

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**A. CLASSIFICATION OF SUBJECT MATTER**

H04N7/36

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According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

H04N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ, WPI Data

### C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages
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Relevant to claim No.

X "Recommendation H.263: Video coding for  
low bit rate communication"  
ITU-T DRAFT RECOMMENDATION H.263,  
February 1998 (1998-02), pages 1-167,  
XP002176560  
page 129, paragraph Q.1 - page 142,  
paragraph Q.7.2  
figure Q.1/H.263

1-6, 8-13

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☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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# INTERNATIONAL SEARCH REPORT

ational Application No  
/US2005/011359

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>GHANBARI M.: "STANDARD CODECS: IMAGE COMPRESSION TO ADVANCED VIDEO CODING. Chapter 8: Coding of high quality moving pictures (MPEG-2)" 2003, THE IEE ( THE INSTITUTION OF ELECTRICAL ENGINEERS) , LONDON, UK , XP002364049 ISBN: 0-85296-710-1 pages 181-226 page 200, line 6 - page 205, line 11; figure 8.11</p>	1-6, 8-13,15
A	<p>SHIN J H ET AL: "REGULARIZED ITERATIVE IMAGE INTERPOLATION AND ITS APPLICATION TO SPATIALLY SCALABLE CODING" IEEE TRANSACTIONS ON CONSUMER ELECTRONICS, IEEE INC. NEW YORK, US, vol. 44, no. 3, August 1998 (1998-08), pages 1042-1047, XP000851618 ISSN: 0098-3063 page 1044, right-hand column, line 15 - page 1045, left-hand column, line 2 figure 4</p>	1-15
A	<p>WELLS N D ET AL: "Standardisation of scalable coding schemes HDTV" IEE COLLOQUIUM ON DIGITAL TERRESTRIAL TELEVISION, 10 November 1993 (1993-11-10), pages 6-1, XP006520125 IEE, London, UK the whole document</p>	1-15
E	<p>WO 2005/093661 A (THOMSON RESEARCH FUNDING CORPORATION; TOURAPIS, ALEXANDROS; BOYCE, JIL) 6 October 2005 (2005-10-06) page 11, line 9 - page 12, line 15 figure 6 claims 1,11,23</p>	1,2,8,9, 15

# INTERNATIONAL SEARCH REPORT

Information on patent family members

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 2005093661 A	06-10-2005	NONE	